

Fall Issue 2021

SOUTH DAKOTA SOYBEAN LEADER

A publication of the South Dakota Soybean Association

2021 Fall Check-In

- ▶ National Biodiesel News
- ▶ How to Manage Soybean ROI in a Crop Year Impacted by Drought
- ▶ Healthy Eating on the Go
- ▶ Soy Oil

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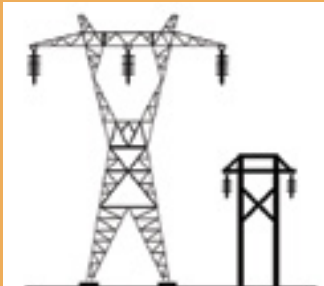
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PRESIDENT'S OUTLOOK

Policy Vs. Politics

The South Dakota Soybean Association (SDSA) works to develop policies and events on the local, state, national, and international levels to help soybean families thrive. In 2019 I traveled to Washington D.C. four times to meet with congressional representatives and aides expressing farmer concerns about trade and tariffs imposed on soybeans. Each time we visited, we implored our leaders to rescind tariffs due to the economic damage they were causing South Dakota farm families. We also lobbied vigorously for market facilitation payments to replace some of the income farm families lost because of the tariffs.



JORDAN SCOTT
SDSA President

SDSA strives to maintain bi-partisan policy decisions and to keep personal politics out of those decisions.

We do not champion one party or philosophy over another. Organizations that utilize party politics to establish farm policy lose effectiveness when the opposing party is in the majority. Since my time on the SDSA board, we have supported bills, legislation, and policies proposed by legislators on both sides of the aisle. Our policy discussions focus on what is best for South Dakota Soybean farmers, not what is popular with one party or the other. There have always been leaders who are great advocates for agriculture from both parties in South Dakota and Washington D.C. We have worked closely with Democrats and Republicans alike. It's no secret that South Dakota is a pretty red state, but that doesn't mean that we only work with Republicans. Nothing would get done if that were the case, and the bills we support in Congress would die.

I point out all of this for one reason. The South Dakota Soybean Association does not have a political affiliation. We represent ALL soybean farmers in the state, regardless of their political affiliation or the party that is in the majority. I personally keep political posts, memes, and "discussions" off of my social media pages because I represent all farmers regardless of political affiliation.

We value the opinions and suggestions of all soybean farmers and consider them when making decisions as a board. When the SDSA board reaches a majority decision to support or oppose a bill or policy, we move forward in unison. All board members support that decision regardless of their personal opinions. We are always open to ideas, thoughts, criticism, and feedback from the farmers we represent.

If you have any feedback for us, please reach out and let us know. Are we perfect? No. However, we do make an effort to improve and are always seeking ways we can do better. We are much more effective when we are all on the same team. Let's all work together for the benefit of South Dakota farm families. ■

SDSA President Jordan Scott



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SOUTH DAKOTA SOYBEAN LEADER

A publication of the South Dakota Soybean Association

Fall Issue 2021 | Volume 10 Number 3

- 3** President's Outlook
- 5** Letter from Your Checkoff Chairman
- 6** Market Update
- 7** National Biodiesel News
- 8** Soy Industry News
- 11** Executive Director Letter
- 12** How to Manage Soybean ROI in a Crop Year Impacted by Drought
- 14** Porktober
- 16** Robb Long - A Big-City Commercial Photographer Living in Small-Town South Dakota
- 18** Hungry for Truth
- 20** Healthy Eating on the Go
- 22** Soy Oil
- 24** Health & Safety
- 26** Detecting Soybean Cyst Nematode
- 28** Soil Health
- 33** PoreShield™ Sioux Falls Application
- 34** Why Membership Matters



PAGE 16

**Robb Long - A Big-City Commercial
Photographer Living in Small-Town
South Dakota**



SOYBEAN CHECKOFF FALL 2021 OUTLOOK

By Tim Ostrem, SDSRPC Chairman

Your Soybean Checkoff is invested in many projects and organizations. The Soybean Transportation Coalition (STC) is vital for promoting transportation projects essential to the efficient movement of soybeans in the U.S. and for international trade. Many local bridges have lowered carrying capacities or have been closed, causing inconvenience, extra time, and increased cost of transportation. The South Dakota Soybean Checkoff is working with STC to find ways of repairing or replacing local bridges using innovative, low-cost methods. We are also offering to assist local governments with engineering expenses to evaluate rural bridges that farmers rely on to move their soybeans from field to farm to market.

Inland waterways move vast amounts of agricultural products domestically and internationally. When the river system is not operating efficiently, it impacts the price of our soybeans. Identifying locks and dams that are aging or failing is essential. Lock 25 north of St. Louis is the most notable in need of upgrading today. Partnering with industry and other organizations to offset engineering costs can help bring attention to their importance as they are prioritized for repair. STC was instrumental in the development of the Port of Blenco south of Sioux City, Iowa. Having that barge facility will help reduce transportation costs for fertilizer coming to the area and soybeans loaded onto the barges for export.

We have partnered with the City of Sioux Falls to apply PoreShield, a soy-based concrete preservative developed through research funded by the Soybean Checkoff. The preservative, applied to a section of Marion Road, penetrates concrete up to 1-1/2 inches to protect concrete from the elements and extend its life 5-7 years. It is an environmentally safe and renewable product that will help reduce road construction and help to lower taxes.

Demand for soybeans is a high priority the South Dakota Soybean Research and Promotion Council. Historically, soybean oil has been a low-value by-product of crushing soybeans. The development of biodiesel increases the value of soy oil, which helps drive the price of soybeans. A recent study by Trinity Research proves that biodiesel provides tremendous health benefits to communities with high diesel usage by trucks, vessels, or heating fuel referred to as Bioheat (fuel from biodiesel). States, particularly on the coasts, are moving away from fossil fuels to biodiesel. The newest generation fuel, Renewable Diesel, is made from 100% soybean oil. It can even be used as jet fuel! It has characteristics similar to conventional diesel fuel, including a lower cloud point, and can be transported through pipelines. These products are creating tremendous demand and driving the price of soy oil to historic levels.



TIM OSTREM
SDSRPC Chairman

The South Dakota Soybean Research and Promotion Council is also invested in research at SDSU. Two exciting projects funded by the checkoff this year are gall midge and the development of biopolymers from soybean oil. Both of these projects hold promise for the future of families growing soybeans. I welcome any questions you may have about the Checkoff and how our board invests checkoff dollars. Go to sdsoybean.org and select "Contact us" at the top of the page. ■

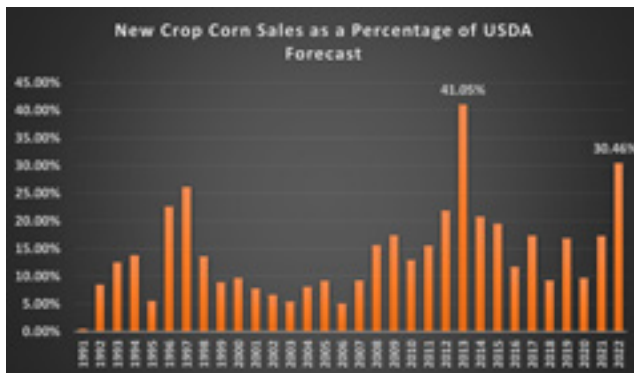
CHECKING THE PULSE OF EXPORTS

As one marketing year gets set to close, and another gets set to begin, exports once again remind us why they remain crucial to consistent demand.

By Tregg Cronin, Grain Market Analyst at Halo Commodities

At the time of this writing, there are just a couple weeks left in the 2020/21 marketing year, allowing us to reflect on the best export marketing year corn and soybeans have ever seen. While the official data won't be released until October, it looks very likely both corn and soybeans will achieve or best the USDA's current export estimates. For soybeans, total export commitments currently stand at 2.281 billion bushels vs. the USDA's estimate of 2.260 billion.

Accumulated exports, or shipments, total 2.193 billion bushels, keeping the U.S. well on track to get enough soybeans out the door by August 31st. If soybean exports do indeed match or best the USDA's export forecast, it will move 2020/21 into first place for best export years ever which was previously held by 2016/17 at 2.166 billion bushels.



In corn, old crop commitments currently stand at 2.763 billion bushels vs. the USDA forecast of 2.775 billion. Total shipments, as of August 12th, totaled 2.570 billion, leaving 204 million bushels to move before the end of August. Like soybeans, we believe this is achievable and should make 2020/21 the best marketing year ever for corn exports as well. The previous record was held in 2007/08, which saw 2.437 billion worth of exports.

It is no secret China was a huge part of the 2020/21 export campaign as the country has so far taken 821 million bushels of corn and 1.293 billion bushels of soybeans. As of the latest available data, China has made commitments for 211 million bushels of soybeans and 422 million bushels of corn for the 2021/22 marketing year.



Soybeans have been enjoying a string of daily export sales during the middle of August, but more will be needed to catch up to the pace analysts would like to see. As of August 12th, there were 509.3 million bushels of new crop soybean export sales which accounts for 24.7% of the USDA's current estimate. Corn sales have been slow but enjoyed solid buying out of China this spring and early summer to get the program off to a good start. New crop corn export sales currently total 730.9 million bushels, accounting for 30.4% of the USDA's current estimate. This is the strongest new crop program for mid-August since 2013 and the second-best on record.

After a down year in 2019/20, export demand has come roaring back in 2020/21 and looks to stay strong in 2021/22. A key piece of that demand continues to be China, highlighting the vital role the world's largest importer plays in U.S. demand. ■





NBB CELEBRATES THE RFS

BILLIONS OF GALLONS IN 16 YEARS

Biodiesel industry leaders are celebrating the recent 16th anniversary of the renewable fuel standard (RFS). The RFS came into existence in August 2005. The policy has resulted in a cut of 143.8 million metric tons of carbon emissions over the past decade, according to Donnell Rehagen, CEO of the National Biodiesel Board.

“The RFS is the foundation to our industry. The growth that we’ve seen has been on the foundation of the RFS, which has caused phenomenal growth in the market for biodiesel and renewable diesel,” said Rehagen.

“Before we had an RFS, our industry was maybe 100 million gallons a year,” he said. “We’re now almost a 3 billion gallon a year industry, so it certainly drives that demand for these cleaner fuels that the public is ever-increasingly asking for.”

“It does not stop there,” said Rehagen. The RFS has positioned advanced biofuels, as well as agriculture, for growth in the years ahead. “I think the future is going to be great for biodiesel, but it’s also going to be great for renewable diesel; we’re hearing more as well about sustainable aviation fuel,” he said. “All of those fuels are made out of the same feedstock, so from an agricultural

standpoint, growth in those fuels is an awesome thing. We’re looking to be a 6-billion-gallon industry by 2030; that’s double the size we are today.”

Biodiesel and renewable diesel have contributed to demand for what was once a drag on the soybean market,” according to Rehagen.

“Obviously, [soybeans] are grown for the meal, but you’ve got to have a home for that oil, which is about 20 percent of the soybean. If we’re able as an industry to create a value-add for that soybean oil, just think about what that really means to the farmer at the farm gate,” said Rehagen. “Our most recent study suggests that farmers enjoy about a 13 percent price increase at the farm gate for soybeans because of biodiesel and renewable diesel industry.”

The RFS was created under the Energy Policy Act of 2005 and expanded to specifically include biodiesel and renewable diesel, jet fuel, and heating oil under the Energy Independence and Security Act of 2007.



Photos courtesy of www.biodiesel.org



Kevin and Jordan Scott



Farm to Fork

The Scott Family Farm welcomed over 100 guests to Hungry for Truth's 5th Annual Farm to Fork event. The event started with a tour of the A Homestead Brew where attendees learned about the local business as well as enjoyed cheese from Dimock Dairy. The event continued at Jordan Scott's farm with a meal and program including a presentation from the Scott family as well as from other local farmers.

Dakotafest

South Dakota Soybean had a booth at Dakotafest August 17-19 in Mitchell, SD. The South Dakota Soybean Checkoff sponsored soy-based dust suppressant on 4th and 5th streets at the event. Farmers that stopped by the booth were able to enter in a giveaway for a set of Goodyear soy-based tires. Visitors were also able to pick up soy-based grease pads for fifth wheel plates. Thanks for visiting us at Dakotafest!



Kari VanderWal, Brent Greenway, Adam Kask, Tim Ostrem, Bonnie Dybedahl, Derrick Scott.



Bonnie Dybedahl

Sioux Empire Fair

South Dakota Soybean hosted "Soybean Day" and had a booth in the Pipestone Discovery Barn on August 9th at the Sioux Empire Fair. Young fairgoers planted soybeans to take home. After planting, participants learned about products and uses for soybeans. Other attractions of the barn are live sows, piglets, chicks, layers, dairy cows, beef calves, and information on row crops. If you haven't stopped by the Pipestone Discovery Barn before, check out a live tour on our Facebook page, SD Soybean.



The South Dakota FFA State President and Reporter along with two high school FFA advocates stopped by the SD Soybean office for an industry visit. FFA has a huge positive impact on youth in South Dakota and we're proud to support their mission!



Jerry Schmitz, Mariah Kessler, Drew Peterson, Craig Converse, and Paul Van Sloten serving at the Ag Appreciation Banquet.

Ag Appreciation Day at the Sioux Empire Fair

SD Soybean board directors and staff served the Ag Appreciation Lunch at the Sioux Empire Fair on Wednesday, August 11. Lt. Governor Larry Rhoden, Rep. Dusty Johnson, Jim Woster, Holly Rader, Mike Jaspers and more spoke at the event. It was estimated that the event served around 3,000 farmers and fair-goers.

Shop Talks



South Dakota Soybean hosted two Shop Talks this summer. Producers came from surrounding areas to hear an update from the South Dakota Soybean Association and the

South Dakota Soybean Checkoff. Attendees enjoyed a meal while hearing from representatives from the South Dakota Congressional Delegation as well as a panel discussion on soil health. Watch for dates for upcoming Shop Talks.

Soybean Open Golf Tournament

On Monday, July 19, SDSA hosted their 20th annual Soybean Open at the Brandon Golf Course. 35 teams (140 golfers) of farmers and ag industry folks participated. Thanks to everyone who could attend!



Hanten Family. Todd, Monica, Brittany, and Brock.



Jordan Scott.



Lt. Governor Rhoden, Governor Kristi Noem, Mariah Kessler, Rick Vallery, Shane Odegaard, Adam Krause, and Glenn Muller.

Governor's Reception for High School Champions

On July 14, Governor Kristi Noem hosted high school state champions at the mansion for lunch and dinner. Over 400 students from across the state attended to celebrate their accomplishments and enjoy a meal together. SD Pork, Wheat, Dairy, and Soybean were all sponsors of the meal for the event.



Mark your calendars to join us at AgOutlook on Thursday, December 9, 2021 in Sioux Falls for a tradeshow, speakers, award presentations, giveaways, and more! Visit sdsoybean.org for more information.



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Customers prefer U.S. soy because it's sustainable. But demands for sustainability continue to rise.

Adopting a common practice such as planting a cover crop to slow runoff and increase soil organic matter is another step forward in improving your sustainable footprint. See why sustainability never goes out of season at unitedsoybean.org.



THE POTENTIAL IS UNLIMITED!

Provided by Jerry Schmitz, Executive Director

The SD Soybean Association and SD Soybean Checkoff are both fully engaged in efforts to protect and enhance the profitability of farm families. The Association has been working with congressional offices on policy issues involving infrastructure, estate tax, conservation, climate, and several other issues. All of these have a tremendous impact on your freedom to farm profitably. The Association is also working to provide cropping practices and sustainability information so that farmers can see and compare methods and understand the short-term and long-term economics of each. Farmers know the unique characteristics of each field and which cultural practices work best for that field. As farmers continue to adapt their tillage, crop rotation, or use of cover crops, in-field comparison and real-world economic data can help to make choices that work best on your farm.



JERRY SCHMITZ
Executive Director of SDSA
and SDSRPC

The South Dakota Soybean Research and Promotion Council is constantly looking for opportunities that increase demand for soybeans and soy products domestically and worldwide. Demand for meal and oil drives the on-farm price of soybeans. Today 70-80% of our soybeans leave the state. We have been reaching out to buyers in countries across the world to diversify our portfolio of purchasers and protect farmers from trade disputes.

New uses developed through checkoff-supported research are also driving demand for soybeans. Soy-based motor oil, car tires, foam in car seats, asphalt and concrete road sealants, dust suppressants, artificial turf, running shoes, plastics, and grease/lubricants are a few of the over 1000 uses for soy on the market today, and there is research nationwide to develop even more uses. SDSU has a research project for the development of biopolymers funded by the checkoff.

Ideally, we would like as much processing of soybeans/products and value added right here in South Dakota by local businesses in our communities. That will require in-state development of processes and businesses. The South Dakota Legislature recently approved funding for the Dakota Bioproducts Institute, a joint project between SDSU and the South Dakota School of Mines and Technology to provide university-driven research and development utilizing South Dakota grown products. The potential is unlimited for developing new processes and products made from crops, wood, and livestock.

Having the crops, livestock, and new technologies available here in South Dakota will help grow existing businesses and attract new businesses. The result will be keeping our most precious commodity, our kids, from leaving the state for employment. We can keep them home!

The potential for a bright future has never been greater. The SD Soybean Checkoff and Soybean Association are working together to build a solid foundation to ensure that opportunities are created, and farm families have the freedom to take advantage of them. ■

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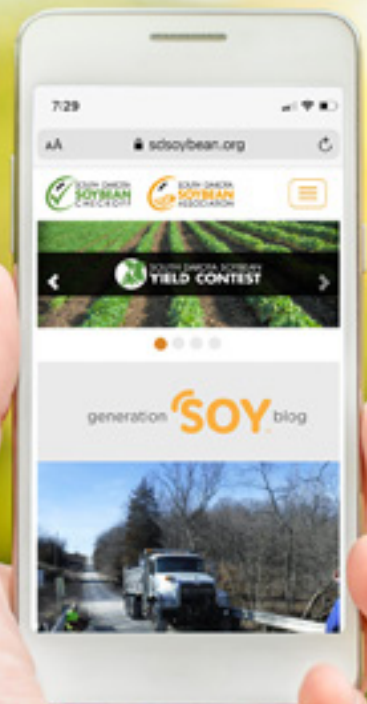
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HOW TO MANAGE SOYBEAN ROI IN A CROP YEAR IMPACTED BY DROUGHT

Everything was looking just fine for most soybean producers in South Dakota during the spring 2021 planting season. Bean markets were strong, riding a wave of optimism. A relatively mild, low-moisture winter and early spring made it easy to get into the fields.

The actual growing season, however, has largely not been so kind.

Much of the state endured hotter-than-normal temperatures in June and drought-like conditions throughout the summer, which has in turn impacted soybean crop development and will depress yield come harvest. In extreme cases, some growers are fearing as much as a 50 percent decrease in soybean yield year over year.

And this, of course, will put additional pressure on an operation's bottom line.

How, then, should producers respond to weather the storm as best they can?

START BY EVALUATING ANY AND ALL INPUT COSTS.

"This is a business, and you have to operate it as such," says Lori Tonak, a seasoned ag educator from Kimball, S.D. who works with growers across the state through the South Dakota Center for Farm/Ranch Management (SDCFRM) at Mitchell Technical College.

Tonak notes that there are certain input costs—fertilizer as well as herbicide and fungicide applications—that deserve careful consideration from producers in a drought-stricken year such as this.

"Is it really worth putting on more chemicals? What will this do to my bottom line?" says Tonak. "Those are the hard questions that growers have to ask themselves."

Tonak teaches alongside SDCFRM program director, Blaine Carey, and fellow instructor, Erin Yost. Tuition costs \$1,600 per year, but the program's objective—to equip producers with the tools and knowledge they need to run a more efficient business operation—can help participating farms manage against tightening margins with smarter, more informed decision-making.

The counsel they've largely been offering area growers this year is to pay close attention to those variable operational expenses—not to mention projected revenue, accounting for yield, existing contracts and soybean market trends—when evaluating on-farm decisions.

Tonak says many are opting to forgo fertilizer given the drought effects to reduce expenses. Most are, however, sticking with a planned fungicide in order to hang onto whatever yield they can muster from this year's crop.

KEEP ACCURATE, DETAILED RECORDS OF ALL OPERATIONAL ACTIVITIES.

Keeping accurate, detailed records on all on-farm activities, expenses, and revenue is always important for producers. And this year's challenges offer a good reminder as to why.

"These guys really have to look at where they're sitting," says Tonak. "There's an accounting software program, Easy Farm, we highly recommend they use. It's only for agriculture, and it does a great job of tracking everything."

The SDCFRM program helps farmers get their data set up in the accounting software and provides training and support so that

they can track operational expenses and revenue efficiently.

Strong record-keeping provides producers with the information they need to make decisions confidently, particularly when factoring in pending crop insurance claims.

"Crop insurance plays a big role in this kind of year," says Tonak. "They're going to look at how much crop insurance will come in to cover these costs to try to salvage something off of this crop."

FIND SUPPORT THROUGH THE SDCFRM PROGRAM.

As noted, enrollment in the SDCFRM program costs \$1,600 per year. Scholarship assistance is available for qualifying operations, and interested growers can request an on-farm visit to learn more about the accounting software and the end-of-year analysis they can expect prior to signing up.

In addition to advice on in-season management decisions and crop insurance, the program provides growers with tax insights.

Tonak points out that it's these sorts of business skills that can greatly impact an operation's financial sustainability over the long haul.

"That's the goal," she says, "to get them to that point where they are financially sound, and they don't have to worry as much when a year like this hits."

For more information on the program, visit mitchelltech.edu/programs/sdcfrm or call 800-684-1969. ■

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“PORKTOBER”

OCTOBER – OR “PORKTOBER” – IS CELEBRATED ANNUALLY AS NATIONAL PORK MONTH.

Submitted by SD Pork Producers Council

October is the time of year when hogs were traditionally marketed. Today, hogs are marketed throughout the year, but October is still a time for the industry to encourage consumers to see the benefit of adding pork to their diet.

The South Dakota Pork Producers Council (SDPPC), which serves as the industry voice for swine producers, works throughout the year to promote the nutritional value and versatility of pork. This year, the council worked in conjunction with Smithfield Foods and Downtown Sioux Falls, Inc., to host the inaugural “Downtown Pork Showdown” for consumers in the state’s largest community. Throughout the month of September, diners were encouraged to order a featured pork dish from the 16 participating downtown restaurants and vote on a variety of categories within the DTSF Digital Passport App. The restaurant with the highest average score by the end of the month is the Downtown Pork Showdown Champion.

According to Joe Batcheller, DTSF president, “DTSF is thrilled to host the inaugural Downtown Pork Showdown with Smithfield Foods. People have been asking for another DTSF food competition. This new promotion will be a fun and engaging way for people to sample the culinary talent of downtown’s food scene.” People have been asking that DTSF hold an annual “Porktober” event to help celebrate National Pork Month.

The Council is also hosting a Bingo Party through October. Participants print out a bingo card from the SDPPC website then note when and where they ate a pork entrée from any South Dakota restaurant, food truck, or mobile vendor. The first 100 participants who visit a minimum number of restaurants are eligible to receive prizes ranging from t-shirts to \$50 in pork certificates. (Please note there is still time to get in on the bingo party. On October 31, all cards will be put in a drawing for half a hog. If you would like to play, please go to sdpork.org/pork-bingo to download your pork bingo card.)

Throughout the year, pork producers volunteer to promote their industry. Whether grilling pork for grocery store giveaways and special events or working in the food booth at the State Fair, the message is consistent: today’s pork is a versatile, healthful source of protein, it supplies many vitamins and minerals, and many cuts of pork meet the criteria for the American Heart Association’s Heart-Check mark.

Promoting the benefits of pork also helps promote the state’s soybean industry. The swine industry is the number one consumer of soybeans in South Dakota; according to research by the Pork Checkoff, the state’s swine herd will consume more than eight million bushels of soybeans in a year. ■





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Left to Right: Matey, Leighton, Robb, Seanix, Misten, Flynn and Ruby Long. Photo by Lisa Aust Photos.

ROBB LONG

A BIG-CITY COMMERCIAL PHOTOGRAPHER LIVING IN SMALL-TOWN SOUTH DAKOTA

Beatles' lead singer, John Lennon, is credited with the quote, "Life is what happens when you are busy making other plans." This perspective would be shared by Garretson, S.D. resident and photographer, Robb Long. If you would have asked the Virginia native back in 2001 where he would see himself, rural South Dakota likely would have been his last answer. That was before Robb met his wife, Misten, and had three young children together. Because of this, it makes sense that a photographer of Robb's caliber lives in small-town South Dakota.

Robb describes his professional title as a "location advertising photographer". This is a label that is well earned as he's been involved in the industry since about the age of 14; this is when he got his first professional camera from his father who was a wedding photographer himself. This led Robb to doing photo shoots at sporting events for the local newspaper at the age of 16. Robb took photography classes in high school and continued to improve his craft into college at Marshall University. However, it



wasn't until he transferred to Savannah College of Art & Design where he received a degree and really took his abilities to the next level when he learned the intricacies of the profession.

After graduating from Savannah College of Art and Design in 2003, Robb followed a career that would lead him to New York City, Chicago, and Minneapolis— where most of the commercial photography opportunities can be found. Robb became the Chief Photographer/Photo Editor for a magazine conglomerate in Minnesota— shooting celebrities, professional athletes, feature stories, and magazine covers.

In 2012, an opportunity presented itself for Robb to move to South Dakota and work closely with Sanford Health. After that experience, he connected with a local creative director who asked if he ever did ag photography. His first client in this industry was a tractor manufacturer. From there, his ag client list expanded to large co-ops, seed companies, and ag trade organizations.

“Over the course of my career, I’ve developed a reputation for capturing real, authentic imagery,” explains Robb. “My whole life prior to living in South Dakota, I really never got involved in agriculture simply due to location, but now I’m living here in the heart of that industry, I’m hooked.”

Robb has been named as a Top 200 Commercial Photographer in the World three times: in 2020, 2021, and 2022. “The commercial photography industry has noticed what I’ve done, and my ag portfolio has been a big part of those awards,” says Robb. “Currently, my clients in the ag Sector make up the lion’s share of my business. I really enjoy working with the farmer. I truly feel that farmers are making a difference and are stewards of the land. I like to think that I play a small role in telling their story of how they responsibly and effectively feed the world.”

For the foreseeable future, Robb will continue to focus on raising his family in Garretson and plans to continue to tell stories through photography for his commercial clients.

Look for his work in future issues of the Soybean Leader, and you’ll continue to see his work promoting local and national ag companies as well. ■



IF YOU'D LIKE TO SEE MORE
OF ROBB'S PORTFOLIO, VISIT
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While planning your football party menu, remember South Dakota soybean farmers are fans of putting healthy and safe food on your table. They also contribute to enhancing your football experience in some pretty surprising ways. Here's a fun fact to share with your party guests: Soybeans can be used to create athletic turf. The turf in the Dana J. Dykhouse Stadium at South Dakota State University is just one example of a football field covered with innovative BioCel® technology, which is more sustainable than typical petroleum-based polymers.

GAMEDAY MEATBALLS

Course: *Appetizers*
 Cook Time: *25 minutes*
 Servings: *40 cocktail meatballs*

INGREDIENTS

- 2 lbs. quality ground beef
- 2 eggs
- 1 tsp. sea salt
- 3/4 cup fresh onion, finely diced
- 1 Tbsp fresh garlic, minced
- 3 Tbsp Italian seasoning
- 1 1/2 Tbsp crushed red pepper flakes
- 3 Tbsp Worcestershire sauce
- 2/3 cup milk
- 1/2 cup Parmesan cheese, grated
- 1 cup of bread crumbs



INSTRUCTIONS

- 1) Preheat oven to 450 degrees.
- 2) Mix first eight ingredients well and then incorporate last three ingredients.
- 3) Hand roll meatballs slightly larger than an inch and place on a foil-lined cookie sheet.
- 4) Bake for approximately 25 minutes.
- 5) Dip in your favorite barbecue sauce and serve.



WHAT IS HIGH OLEIC SOYBEAN OIL?

Did you know that chances are you consume high oleic soybean oil almost every day?

It is in salad dressings, baked goods, fried foods, and snack foods. Don't worry, it's a healthier fat alternative! But the question still remains: What is high oleic soybean oil?

High oleic soybean oil is a fairly new monounsaturated fat. The word "oleic" is another term for monounsaturated fatty acid. This oil was created by the U.S. soy industry.

High oleic oils first entered the market about ten years ago as the industry attempted to phase out its use of partially hydrogenated oils. They did this because hydrogenated oils have been shown to contain dangerous levels of trans fats. These oils have now become the industry's preferred substitute for partially hydrogenated vegetable oil.

High oleic soybeans are a GMO crop that delivers oil with lower saturated fat than conventional soybean oil and contributes no trans fats to products. The oil also delivers three times the amount of beneficial monounsaturated fatty acids than regular soybean oil. High oleic soybean oil extends a product's shelf life, offers the longest fry life of edible oil, has an improved fat profile, and contains a neutral flavor.

One of the greatest results of high oleic soybean oil is the health benefits it offers. This product can be labeled as "U.S. grown" and "heart-healthy." It also eliminates the need for food-grade chemicals to be added to the product. This crop is a great example of how GMOs can have a positive impact on our health.

Learn more about what food products contain soy by checking out our blog on hungryfortruthsd.com!



HEALTHY EATING ON THE GO

Provided by Charlotte Rommereim



Harvest is a busy time for the farm family, and healthy eating becomes a challenge even for dietitians who are also family farmers. Just as farmers prepare and maintain all their equipment for harvest, farm families can prepare for and maintain healthy eating for optimal “operation” during this stressful time.

As pre-harvest equipment preparations begin in the weeks before harvest, farm families can prepare for healthy eating. Registered dietitian and South Dakota family farmer Katy VanderWal shares how she prepares. “In the months leading to harvest, I try to get some things in the freezer. When cooking pre-harvest, I will often make two of an item and put the second in the freezer.”

The right equipment makes healthy meal preparation easier. Dietitian turned full-time farmer, Jennie Schmidt of Sudlersville, Maryland, gives this advice: “Harvest requires me to think about what food items I need to have on hand for on-the-go eating and ingredients for a slow cooker meal. During harvest, slow cooker meals are my friend and mean we will have something nutritious to eat with veggies and protein.” Online services help VanderWal. She saves time in town by completing her grocery order online while waiting in the field.

Having food throughout the day maintains the farmer’s energy for those long days of harvest. In addition, healthy

eating can help reduce stress. With that in mind, make sure everyone has something to munch on. Schmidt says in the morning, she packs fruit, granola bars, baby carrots, trail mix, meat and cheese sticks, and sandwiches for healthy options. Farm families become creative with tortilla wraps, pizza dough, and even waffle cones to make food that can be eaten without silverware. Fluid intake also helps with stress management. Make certain everyone has water or other beverages available to drink.

Ensuring everyone is eating healthy meals often requires family participation during harvest. “If I am in the field, and my husband is driving the truck to the yard, I ask him to set the crockpot on low, so we all can enjoy a supper that isn’t burnt! I also engage my kids, asking them to dish up the food in containers and send it to the field with a truck driver.” VanderWal says.

To maintain optimal operation of your farm family through healthy eating, prepare food pre-harvest, utilize the right equipment, provide food and water throughout the day, and work together.

And just like there can be a machinery breakdown in the field, VanderWal adds from experience, “Do your best to be prepared and plan meals ahead. But, be forgiving when the plan falls apart.” ■

Favorite Family Recipes

Stromboli

A VanderWal family favorite for a freezer meal that is finger food to take on the go.

Ingredients

- Loaf of Frozen Bread Dough (white or wheat)
- Pizza Toppings (hamburger, pepperoni, pork sausage, onions, peppers, etc)
- Pizza Seasoning
- 3 cups cheese

Directions

- 1) Defrost frozen bread dough.
- 2) Roll out into a large rectangle.
- 3) Sprinkle 1 1/2 tsp. pizza seasoning down the center of the dough.
- 4) Add your favorite pizza toppings and cheese.
- 5) Roll sides up and pinch to seal.
- 6) Place on pan, seam side down.
- 7) Brush with egg white.
- 8) Bake in a 350-degree oven for 20 minutes.
- 9) Cool, wrap in saran wrap and freeze.



On Baking Day

- 1) Place Stromboli in the refrigerator the night before so it is defrosted.
- 2) Place on pan, seam side down.
- 3) Bake for 20 minutes or until golden brown and baked throughout.

To serve: Slice and serve with a side of pizza sauce.

Harvest Ham Sandwich

A little crunch and a bit of sweet to your lunch sandwich. Serve with carrot sticks and hummus.

Ingredients

- 2 slices bread
- 2 tablespoons apple butter
- 4 slices ham
- 1 apple (sliced thinly)
- 1 slice Havarti cheese

Directions

- 1) Spread apple butter on one side of bread.
- 2) Layer apple slices, then ham slices, and top with a slice of cheese.
- 3) Top with the second slice of bread.



SOY OIL

Provided by United Soybean Board

Soybean farmers led the original development and now lead the continued growth of the biodiesel industry. Through the soy checkoff, research and promotion efforts help ensure biodiesel remains one of the most tested and widely used renewable fuels on the market.

In the U.S., biodiesel manufacturers rely on U.S. soybean oil as the primary feedstock for this renewable fuel. Today soybean oil accounts for about 54% of feedstock demand, with reclaimed grease, animal fats, corn, and canola rounding out the supply picture. Biodiesel was the first domestically produced and commercially available fuel to meet the Environmental Protection Agency's definition of advanced biofuel. Compatible with today's vehicle technologies, biodiesel provides one of the best carbon-reduction strategies available.

At its inception, biodiesel was viewed as a way to absorb excess supplies of soybean oil generated by lost food demand because of the ban on partial hydrogenation. Processors like ADM, Bunge, and Cargill needed a way to move excess inventories of soybean oil as they crushed soybeans for the value-driven meal component used for feeding swine and poultry. Historically, the value of the whole bean once crushed has been driven by the meal segment as on a volume basis, crushed soybeans produce four times as much meal as oil; residual oil has traditionally accounted for about 30% of the composite soybean value.

Today, biodiesel and renewable diesel are leading solutions in combating climate change. Readily available and sustainable, biodiesel reduces greenhouse gases by up to 86% compared with petroleum diesel, according to the National Biodiesel Board. This metric has driven legacy petroleum producers to look at converting assets to the production of renewable diesel as a way to show shareholders their commitment to a green future.

The speed of this petroleum conversion has added new market demand. Soybean oil prices have surged during the 20/21 marketing year, reaching a record high of 74 cents in June – more than double the average price of ~36 cents in November. While prices have retreated from the record high in June, they have structurally remained in the 58-65 cent range since that time – sustained price strength not seen since 2008, when SBO values were supported by high crude oil prices over \$100/barrel.”

The component value of soybean oil is now approaching parity to the meal component; the oil share of value is now about 45%, up from ~30% in mid-January. This fundamental shift in the relative value of co-products is now positioning the industry to crush for oil rather than the meal.

We expect very tight supplies of soybean oil over the next few years, as the crushing industry expands existing facilities and builds new ones, some with petroleum industry partners. Those wishing to use U.S. soybean oil for their products will need to adapt their contracting behavior. Historically, soybean oil has been easily accessible due to availability; now, forward



contracting will be needed to ensure secure supply.

The same goes for high oleic soybean oil which has become a preferred food stock for novel chemistry and new industrial uses outside of biofuels. High oleic soybean oil (HOSoy) was first produced in 2012 and the USB, along with QSSBs, have piloted development through the years. Conventional and HOSoy are now used in over a thousand products as a replacement for petroleum inputs. The excellent sustainability attributes for U.S. soybeans, meal, and oil make it an ideal feedstock for the development of green technologies. With more than 1,000 soy-based products on the market, new application areas for soybean oil include tires, paints, coatings, motor oil, asphalt, concrete, dust suppressants, and surfactants. (see more at soynewuses.org)

In summary, U.S. soybean oil is an invaluable feedstock for use as a sustainable replacement for petroleum-based products. Because of that exceptional performance, supplies will be tight for fuel, food, and industrial applications, as the industry expands and builds new crushing and refining capacity in the United States. Forward contracting is an ideal way to ensure supply exists for your products. ■



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STAY SAFE DURING HARVEST

By Tom Steever

MOST PEOPLE IN HIS CIRCUMSTANCES WOULD NOT HAVE LIVED TO TELL THIS...

Although it's going on four decades since I last relayed the story as a farm journalist, the day I heard it is vivid in my memory. It was a nice day at about this time of the year—I drove out to a friend's farm, because I was told there'd been a miracle. It might make a good radio story, I was told. After a fascinating interview, I left the farm with a cassette, cutting edge technology of its day, full of evidence that angels watch over us. I'm keeping the name to myself, but stick with me; a story like this could be a lifesaver.

Harvest can be a bugger. It moves fast, and there's a ballet of sorts to keep everyone and everything in productive sync. "David" (it's a made-up name for a real person) was irritated that his son was not back to exchange an empty wagon for the one now standing idle and full of freshly chopped silage. Instead of just waiting, David reluctantly shut his chopper down to grease it. As he was searching for the first dry zerk, he noticed the unmistakable sound from the farmstead of the one hundred PTO horsepower hauling tractor sounding as if it was at a high RPM and under load. Irritation faded immediately to alarm.

David dreaded every dry-mouthed second it took for him to get back to the home place. When he arrived, his worst fear was suddenly real. His son was upside down, eyes closed, with his coverall wound so tightly around the PTO shaft it would have squeezed the life out of most people. Here's the miracle: David's son was not most people, and the PTO shaft clutch, almost new, was slipping. The eyes opened with faint realization that someone had come to the rescue, but apparently the potential rescuer was in shock and in need of a prompt to act. "Shut that tractor off!" is a paraphrase of what David heard from the son he assumed to be lifeless.

Action was immediate. The tractor was shut off, and David high-tailed it to the house for every kitchen cutting utensil he could carry, ignoring the often-repeated warning against running with such things. The young man was pared from his clothes, something he'd tried unsuccessfully, breaking every blade from his own pocketknife, before being discovered. Paramedics swooped in and there were days in the hospital, but not because of mangled limbs. Damage to nerves from the tightened clothes made recovery necessary before the young man could discard a pair of crutches. He lived, recalling in a trembling voice for a wide-eyed farm radio reporter what happened, and what could have happened. What was not told in that radio story is that to this day, the young man, and the family he's raised, farm part of the land on which his life almost ended.

During the interview, David, who is gone now, signaled his desire to get in a few words of his own. Eyes glistening on top of a big smile, he thanked God for the miracle of the son, in new Carharts, leaning on crutches beside him. It took some effort for David to explain that it wasn't the first time the PTO clutch had slipped. He said in the interview the rare slippage could be easily remedied with a half-turn of a Craftsman torque-wrench. "Now," said David, concluding the interview, "it won't happen." ■



TOM STEEVER
Brownfield Ag News



SAFELY COMPLETING HARVEST

BE MINDFUL OF THESE ITEMS TO HELP STAY SAFE DURING HARVEST SEASON.

Completing harvest is marked annually as the important end to a successful growing season. Doing so safely is every bit as important. There are many points during harvest at which accidents are common, such as transporting large equipment on public roadways.

“Make sure all of [the equipment’s] safety lights are working, and the slow-moving vehicle placard is in place and visible,” said John Keimig, a youth safety field specialist at South Dakota State University.

One of the most common causes of accidents during harvest is that farmers push themselves too hard. Keimig warns about fatigue and how to avoid it.

“Take some breaks, increase your water intake, rotate tasks,” said Keimig. “If you’re always the guy sitting in the combine for hours, and hours, and hours on end. If you have somebody else that’s trained to do that, maybe you can let them take a few rounds and you go do unloading once in a while.” He adds that it is not only a question of stamina but also monotony. “Do some things to break your routine,” he said.

It is important that farmers get a reasonable amount of sleep and that it is good sleep. “Consuming too much caffeine to stay awake during the workday can interfere with sleep,” Keimig said. As much as possible, he suggests clearing one’s mind before turning in. “Before you go to sleep, maybe make a list of the things you need to accomplish the next day,” he said. “That way, if those get off your mind, you give your brain the opportunity to shut down and allow you to sleep.”

Farmers spend most of the season surrounded by tons of fast-moving machinery, but that is especially the case during harvest. It is important, said Keimig, to take time to consider actions that endanger the operator.

“If, for some reason, you’re going through your field and you plug up, shut the machine down,” he said. “Even though you think you’re really fast, as you go to unplug, you’re not fast enough to react in such a manner that you’re not going to get pulled in.”

Many combines are lost to fire during harvest. Keimig reminds farmers to keep the machine as free of dust as possible to avoid a conflagration, but at the same time, be prepared. “Have fire extinguishers around,” he said. “Maybe have one in the cab of the combine and have one mounted outside also; and make sure those are charged.”

As if the risks aren’t great enough for any age, Keimig underscores that children be kept clear of machinery and dangerous harvest activity. Never give a task to a youngster who is not mature enough to handle it.

The season brings with it the necessity to empty grain bins in preparation for harvest. With entrapment accidents all too common, Keimig recommends avoiding the risk. “Do your best, in general, to avoid entering a grain bin,” he said. If it becomes necessary to dislodge grain, Keimig’s recommendation is to shut down unloading equipment while maintaining airflow through the bin and getting a neighbor to assist from outside of the bin. “If you’ve got to go in,” he stresses, “don’t do it alone.” ■



SOUTH DAKOTA CHECKOFF HELPING FARMERS DETECT SOYBEAN CYST NEMATODES

By Carol Brown, Soybean Research Information Network

South Dakota farmers have numerous allies when it comes to improving productivity and yield. Their retail agronomist, financial advisor, and grain hauler all play important roles in farmer success. Researchers and Extension experts are also in their corner, continuously searching for ways to increase yield and keep expenses down.

Emmanuel Byamukama is one of these experts. The South Dakota State University (SDSU) Extension Plant Pathologist is researching ways that farmers can improve soybean production in the state and has focused on soybean cyst nematode (SCN) impact.

“The first step in managing SCN is to know if you have it in your soil,” says Byamukama. “With other soybean diseases, like white mold or sudden death syndrome, you can see their symptoms easily on the plant and can determine if the disease is present. With SCN, the nematodes are nearly microscopic. By the time farmers can see their destruction, a lot of yield loss would already be occurring.”

The soybean cyst nematode is a small pest that lives in the soil and feeds on the soybean root system. Once in the soil, SCN is nearly impossible to eliminate but there are ways to manage it through crop rotations and planting SCN-resistant soybean varieties to help reduce the damage. SCN is found in virtually every U.S. soybean-producing state and has been detected in 34 South Dakota counties.

SDSU Extension is offering free soil tests for farmers to find SCN presence or to determine if SCN population numbers have changed. The tests are at no cost to the farmer because of funding support from the South Dakota Soybean Checkoff.

“We’ve been offering free soil tests for at least seven years—as long as I’ve been here—and maybe longer,” Byamukama says. “We conduct soil testing so the grower can know the amount of SCN in their soils. This number, or population density, can help them make changes to prevent soybean yield loss.”

The SCN tests can be economically beneficial on several levels. There are private firms that also offer SCN soil tests, but if a grower has many acres to test, the cost can add up, Byamukama says. By making management changes to elude SCN, yields that would have been lost due to SCN are saved. And farmers are seeing the advantages of this service.

“The number of tests we’ve done has increased over the last several years,” he says. “We encourage growers to keep checking every two or three years to see if the SCN numbers are changing. If the numbers increase, that means whatever the producer is doing to control SCN isn’t working, and changes



Soybean cyst nematodes on soybean roots. Photo by Craig Grau, University of Wisconsin

need to be made. It’s a little easier to keep SCN populations down before they reach high levels in the soil.”

If SCN is found in a field, SDSU Extension specialists can help producers with management options to reduce soybean damage. For producers who have not tested for SCN yet, soil sampling can be done basically anytime in spring, summer or fall. If previous soil tests have shown the presence of SCN, soil sampling for another test to detect changes in SCN numbers should be done in the fall after soybean harvest, Byamukama says, as that is when the SCN population is at the highest in the soil.

The soil tests are conducted at the SDSU Plant Disease Diagnostic Clinic. Farmers can mail pulled soil samples to the clinic and are notified of their results within four to six days, depending on the volume of samples coming into the clinic. For information about the SDSU soil tests, visit the Extension website: extension.sdstate.edu/hg-type-testing-management-strategy-soybean-cyst-nematode-control



Soil testing is crucial for detecting the presence of soybean cyst nematode (SCN) in the field. Nematodes live in the soil and feed on soybean roots, causing revenue loss of more than a billion dollars annually nationwide. Photo by Emmanuel Byamukama

Download information on how to collect and mail soil samples for testing: www.sdstate.edu/sites/default/files/file-archive/2018-10/SCN-Soil-Sampling-Info-Sheet.pdf ■

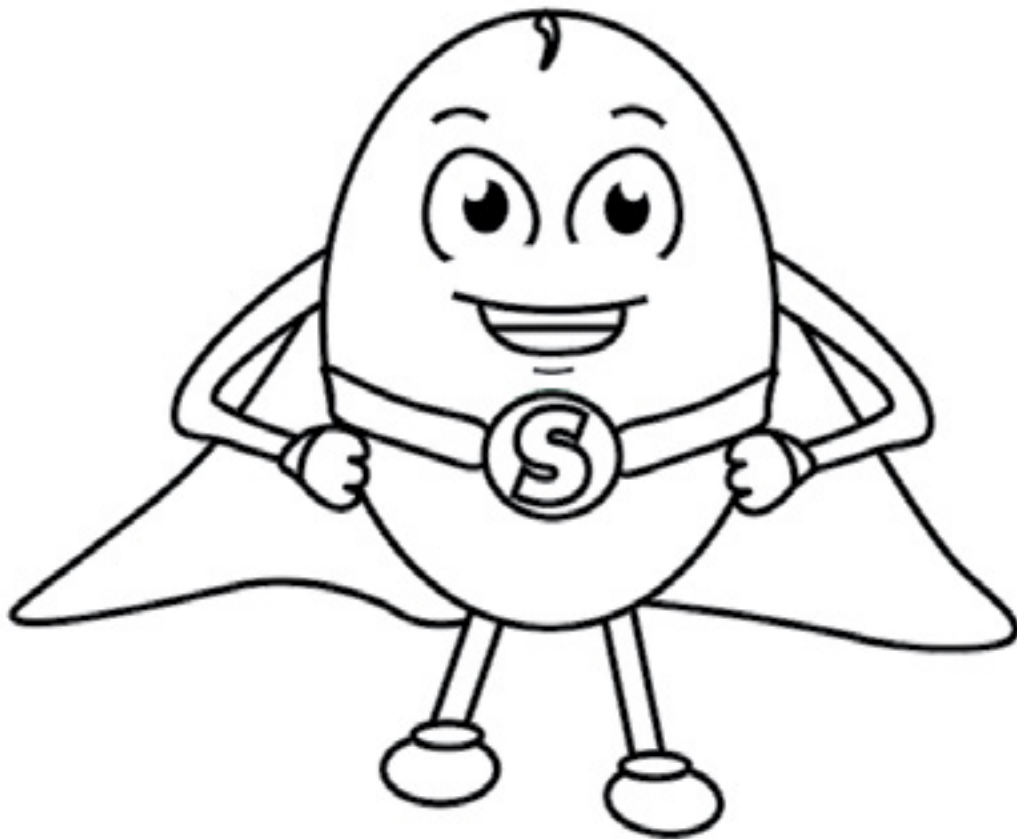
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Instructions: 1. Pour the flour into a large mixing bowl. 2. Pour in the soybean oil over top of the flour.

3. Mix well using your hands. 4. Optional: Add in glitter or food coloring. 5. Knead in glitter and food coloring. 6. That's it! Your super soy sand is ready for some super fun!



INVESTING CHECKOFF DOLLARS

HOW MANY ITEMS IN YOUR CUPBOARD DO YOU THINK CONTAIN SOY?



Taylor Elverson

DROUGHT STRESS AND SOIL

By Taylor Elverson, Soil Health Coordinator for South Dakota Soybean Association

This growing season has plagued numerous South Dakota farmers and ranchers with the effects of drought on their crops and livestock. From my perspective in eastern South Dakota, drought symptoms in crops have been evident for weeks. Lighter, stress-prone soil types have shown symptoms for even longer. Hay yields have been significantly below average, and this fall, the combine will show yield & moisture variability both within and among fields. However, much like the old saying, “A smooth sea never made a skilled sailor,” there is always a silver lining to be found in these challenging years. Droughts give us the chance to evaluate our soil types and soil fertility. Dry conditions highlight soil types with lower water holding capacities and exacerbates fertility issues in fields. Any way we can learn about our farms and work to conserve moisture will only give us an advantage in the next growing season.

The following article by Madhi Al-Kaisi, Integrated Crop Management News, and Iowa State University Extension and Outreach gives a great perspective on what these drought conditions do to our soils and how we can best navigate through them. Even though this article is from the perspective of Iowa production agriculture, this information is still very much relevant to South Dakota growers. In addition, a gentle reminder that the practices mentioned and suggested in this article are not a ‘one-all-cure-all’ to manage drought years. Other practices, including manure applications, are also helpful in mitigating the effects of drought and should be kept in mind, as every operation is different.



Photo courtesy of USDA-NRCS South Dakota

ABOUT TAYLOR ELVERSON

Taylor Elverson is the Soil Health Coordinator for South Dakota Soybean Association. Growing up on a farm in southern Minnesota, Taylor has always had a passion for production agriculture and being a good steward of the land. This led her to pursue a bachelor’s degree in agronomy along with a master’s degree in plant pathology, both from South Dakota State University.

In her role as Soil Health Coordinator, Taylor provides soil health education and conservation education practices to farmers. She is also able to connect growers with a mentor network where they can receive personalized conservation tactics – ensuring success for South Dakota farmers for years to come.



HOW DROUGHT AFFECTS SOIL HEALTH

By Madhi Al-Kaisi

Drought conditions during most of the growing season can have a profound impact on soil health, just as when we have extreme wet conditions. The effect of drought can be noticed very clearly on crop performance when the lack of water availability is severe. This water stress can affect soil chemical, physical, and biological activities essential for plant and soil health.

One of the obvious effects of drought on soil health is the lack of nutrient uptake by crops, as water is the principal medium for moving nutrients into plants as a result of water uptake. The increase in soil temperature associated with lack of soil moisture has an impact on microbial activities and nutrient processing, both of which are important for plant use for biomass and grain production. Microbial activities in soil generally are controlled by soil moisture and temperature. The departure from optimum ranges of soil moisture (water field capacity) and soil temperature (approximately 76-86° F), which varies for different microbial communities in soil, can alter microbial activity. Changes in soil temperature during drought conditions can affect soil organic matter (SOM) decomposition and increase the release of carbon dioxide. Also, during this process, additional mineral N, mostly in the form of nitrate, will be released in the soil system. This change in soil environment affects the stability of SOM and subsequently affects the soil biological system.

The most profound effect that can be experienced in cropland is the excess release of nitrate, which may not be utilized by crops due to lack of moisture available for the plant to uptake nutrients. This shift in biological and chemical processes during the growing season influences many other relationships that are essential for crop performance, quantitatively and qualitatively, by changing activities that are important to nutrient cycling, such as enzymatic activities, changes in soil chemicals concentrations, etc.

MANAGEMENT PRACTICES TO REDUCE DROUGHT EFFECTS

To moderate future drought event's effect on soil health, several practices can be valuable to enhance soil health by improving soil physical, chemical, and biological properties:

1. CROP RESIDUE: crop residue can provide important benefits like improving soil moisture with an increase in soil water infiltration during and off-season, as well as increase recharge of the sub-soil profile. The other benefit of residue is the moderation of soil temperature, where crop residue acts as an insulation layer by increasing soil surface reflectance to sun radiation (i.e., change in Albedo, the ratio of the light reflected by a surface to that received by it, where residue color is lighter than soil surface). These benefits of crop residue directly impact soil biological and chemical properties by reducing soil temperature and the slowdown of organic matter mineralization. The increase in soil organic matter can increase soil water storage capacity (Fig 1.). The other benefit of moisture conservation and its availability to crops during the drought periods is the increase of utilization of nutrients and reduction

of nutrient concentration in soil and loss during off-season rain events.

- 2. COVER CROPS:** cover crops have many critical benefits, especially during drought conditions. The way that cover crops provide such benefits during drought conditions is based on the cumulative effects of cover crops during previous seasons, where they promote better soil biological and physical conditions. It is well documented that cover crops increase soil water infiltration and recharge of the soil profile by improving soil aggregate stability and soil porosity. Furthermore, cover crops contribute to the increase of the soil organic matter pool, which is essential for building soil health.
- 3. BALANCED CROP ROTATION:** crop rotation and diversity of crops within one year or over several years is one of the most important practices that enhance soil health and mitigate drought conditions during the growing season. The diversity of crops on the land can provide a rich soil environment for a healthy and diverse biological system. The inclusion of different crops such as corn, soybean, alfalfa, small grain, etc., provides diversity of root systems that promote a wide range of microbial communities, therefore enhancing soil nutrient and organic matter pools compared to a mono-cropping system (i.e., continuous corn).

These practices, in addition to organic amendments, are important in mitigating unexpected drought conditions in the long term. Along with minimum or no-tillage, these practices can reduce the prolonged impact of drought events by increasing soil resiliency. The degree to which soils in Iowa and the Midwest have absorbed the dramatic impact of drought events was due to the rich soil organic matter content. Factors contributing to that are the temperate vegetation base (i.e., prairie), which encourages greater organic matter accumulation. This unique soil quality provides high water storage capacity that sustains crop production. So, to sustain such soil quality, we need to maintain it through the implementation of soil health principles by adopting conservation systems. ■

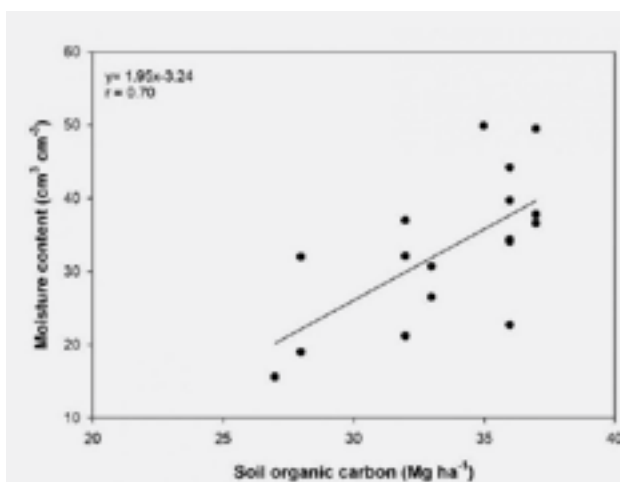


Figure 1. Increase in soil moisture storage capacity with increase in soil organic carbon in 10 years tillage and crop rotation study. (Al-Kaisi et al. 2014)

In addition to crop farmers, the South Dakota drought has also heavily impacted ranchers and livestock producers. With below average hay yields and an uncertain crop yield, feed supply is on the forefront of everyone's mind. This is made even more clear with current hay prices. Thankfully, our friends at the South Dakota Soil Health Coalition have a solution to the chaos with their Grazing Exchange Program. *~Taylor Elverson*

PRODUCERS AND LANDOWNERS CAN HELP EACH OTHER WEATHER THE DROUGHT

By Stan Wise, South Dakota Soil Health Coalition

Farmers and ranchers like to come together and help each other in times of crisis, and this year's drought is no different. Thankfully, there's a website that will allow producers and landowners to work together and help each other weather the drought.

"The lack of adequate forage in rangelands during dry years requires livestock producers to seek additional grazing and feed resources sooner in the production cycle if they are to maintain livestock performance," South Dakota Soil Health Coalition Specialist Dave Ollila said. "The simplicity in using the South Dakota Grazing Exchange helps producers find those needed feed resources."

The South Dakota Grazing Exchange (www.sdgrazingexchange.com) helps producers with livestock in need of forage to connect with landowners who have pastures, cover crops, or crop residue in need of grazing. The free website allows users to create profiles listing what resources they have available, and they can search for others near them who are listing the resources they need. If they find what they're looking for, they can connect with other users to form private grazing agreements.

The website allows producers to list multiple species of livestock, including sheep, goats, beef cattle, dairy cattle, and others. Landowners can list multiple land resource types, including pasture, native/rangeland, crop residue, cover crops, and others. This allows producers and landowners to match with the exact resources they need.



Due to the drought, livestock producers likely have less forage on hand than usual as they head into the fall and winter seasons. Landowners who have post-harvest residue or cover crops can help livestock producers make it through the winter by listing their grazing resources on the South Dakota Grazing Exchange. With the advances in temporary fencing, any field with crop residue or a cover crop could be grazed.

“You would list the number of acres, the time of year it would be available, what land base it is, and also whether it has a fence, whether there would need to be a hotwire fence, whether there would need to be water,” SDSHC Coordinator Cindy Zenk said. “If we can connect the livestock owners with the people with available cropland, pastureland, even Conservation Reserve Program land, possibly, we can keep agriculture in South Dakota very healthy.”

When droughts and wildfires strike, people in the farming and ranching community often donate hay to affected producers. However, if landowners can form grazing agreements with those producers, the relationship will be mutually beneficial. While the producers receive additional forage for their livestock, the landowners receive the soil health benefits that come with the integration of livestock. Some of those benefits are nutrient cycling, increased soil biology, and better soil structure.

“Cycling nutrients through a ruminant animal helps the soil biology make better use of the animal dung as it works to become organic matter once again,” Ollila said.

“Anytime we can get the livestock back on the ground, that is a definite plus both for the ground and the animals,” Zenk said.

When producers and landowners form a grazing agreement, they should work together to form a grazing plan that benefits both parties.

“Planning for water sources, weather protection areas and livestock handling should be developed to have the least amount of impact on the soil. A predetermined plan for the amount of biomass to be removed should be developed in creating a positive relationship for all parties involved,” Ollila said. “The South Dakota Soil Health Coalition has people and resources to help producers develop grazing plans.”

Visit www.sdgrazingexchange.com to begin using the South Dakota Grazing Exchange. To learn more about the South Dakota Soil Health Coalition, visit www.sdsolhealthcoalition.org, email sdsolhealth@gmail.com or call 605-280-4190. ■

Building Connections Soil Health Mentor Network

Giving Advice, Finding Solutions, and Building Connections for Healthier Soil, Healthier Crops, Healthier Livestock, and Healthier People.

South Dakota has a unique climate with a variety of ecosystems that encompass more than 800 different soil types, fluctuating precipitation, and geography as well as land uses. It can be challenging to successfully manage that landscape for healthy and productive natural resources with a positive bottom line. That's why a directory of agriculture and local foods producers throughout the state has been assembled with South Dakota people who are ready and willing to talk with other farmers and ranchers as they navigate through the process of building soil health and using regenerative practices.

“Building Connections” is a 40-page directory that lists volunteer mentors by county, giving their contact information along with a synopsis of their soil health building experiences. Some are using diverse crop rotations or full season cover crops. Others are experts in rotational grazing, multi-species livestock, no-till gardening, community gardening, or managing native grasses. The directory also lists contact information for natural resources management subject matter experts for advice on a one-on-one, personal basis. There are more than 120 mentors ranging from large operations to average size to small local producers or gardeners across South Dakota willing to share their knowledge experiences with others.

The Mentor Network is a free service available to anyone by contacting your local Natural Resources Conservation Service, Conservation District, the South Dakota Grassland Coalition or the South Dakota Soil Health Coalition.

A newly updated version of the “Building Connections” Mentor Network publication is now available. Request your free copy of the booklet today!

USDA
United States Department of Agriculture
Natural Resources Conservation Service
www.sd.nrcs.usda.gov
(605) 352-1200

South Dakota Conservation Districts
www.sdconservation.org
(800) 729-4099

GRASSLAND COALITION
www.sdgrass.org
(605) 280-0127

South Dakota Soil Health Coalition
www.sdsolhealthcoalition.org
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TEACHABLE MOMENTS

For the past two years, Mustang Seeds has funded alfalfa pathology projects at Dakota State University (DSU) in Madison, South Dakota, spearheaded by Dr. Andrew Sathoff, assistant biology professor at DSU. Alfalfa is one of the many types of seed available from Mustang Seeds.

“I accepted a position at DSU in 2019 and quickly approached Mustang Seeds for potential research collaborations,” Sathoff says. “Both of the summers I’ve been researching at DSU, Mustang Seeds has generously funded my projects.”

Sathoff’s alfalfa research efforts led to a connection that gave some of his DSU students an up-close look at the science of soybean breeding.

Sathoff took part in Mustang Seeds dealer days, which brings seed dealers, growers and researchers together to visit research plots and to learn about new products. Sathoff, who gave a presentation on his alfalfa research at the event, connected with Santiago Fleming, soybean breeder for Mustang Seeds’ partner GDM. Because the two scientists operate in different areas of plant life, Sathoff thought the connection presented an opportunity for his research students.

“I thought it would be a good learning experience for my students to be exposed to a bit of plant breeding,” Sathoff says. “I’m a plant pathologist, but another big wing of plant science is plant breeding. My students have no experience with plant breeding. I’ve had some plant breeding training, but nowhere near the level of Santiago or any of the other folks who are at that GDM facility, so I thought it would be a good learning opportunity. It was also a chance to see the different levels of research between a commercial program and a university program.”

Earlier this summer, Sathoff reached out to Fleming to arrange a tour of the GDM facility near Hutchinson, Minnesota. For many of the students, it was their first in-depth exposure to plant breeding.

“I really had no idea about plant breeding, so it was all very new to me,” says Jenni Giles, a biology major from Madison, South Dakota. “I saw a lot of different things, including the breeding process from start to finish, how they cross different plants and the different seed lines that GDM produces. It was pretty cool to see how the process works from their end.”

Conner Tordsen, a senior biology major from Fairmont, Minnesota, also made the trek to the GDM facility.

“We do a lot of plant health work with our research team here at Dakota State, so it was interesting to see the other side, the plant breeding,” Tordsen says. “Breeders are going against different diseases to increase their yields that way, and we’re looking at doing it with fungicides and how we can stop the diseases. Seeing things from the breeder’s perspective was cool and it gave me the full picture.”

“The biggest takeaway I had was seeing the difference between what we do in lab and what plant breeders do,” added Travis Rebstock, a fourth year biology student from Redwood Falls, Minnesota.



In addition to learning about soybean breeding, Sathoff says the exposure to different areas of science could help students decide on a future career path.

“Some of my students don’t know exactly what they’re going to do after graduation, so I thought this opportunity may open a door for them,” Sathoff explains. ■



To learn more about what Mustang Seeds has to offer, visit www.mustangseeds.com.



PORESHIELD™ SIOUX FALLS APPLICATION

Nationwide, soybean checkoff programs, including the South Dakota Soybean Research and Promotion Council (SDSRPC) are working to discover new uses for soybeans to help increase demand and deliver strong ROI for farmers. One great example is the application of PoreShield on the new construction on Marion Road in Sioux Falls, SD.

Weather in South Dakota creates a challenge in maintaining quality roads. That's where soy-based PoreShield™ comes in. Unlike traditional concrete sealers that sit on the surface, PoreShield penetrates into concrete to protect against water and freeze/thaw damage. When compared to untreated concrete, PoreShield has been proven to help extend the life of concrete 5-9 times. After years of research and field trials, this ground-breaking product is now being used nationwide to protect America's infrastructure. The demand for PoreShield keeps growing, and with it, the demand for the soybeans grown in South Dakota.

Each 60-pound bushel of soybeans contains approximately 12.4 pounds of soybean oil. There are 7.7 pounds of soybean oil per gallon of PoreShield™, in the form of Soy Methyl Ester. On average, PoreShield™ utilizes 200 bushels of soybeans per mile of highway joint.

PoreShield™ isn't just used in road and bridge maintenance; it has been applied on patios and walkways at universities, sidewalks, on hundreds of driveways and can be used in other construction and architectural projects including parking lots and garages, curbing, buildings, dams, and pipelines. ■



To learn more about PoreShield or other South Dakota Soybean Checkoff projects, visit our blog online at sdsoybean.org.



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WHY MEMBERSHIP MATTERS

By Brent Greenway, Treasurer and District 1 Representative, SD Soybean Assoc.

In an industry that is seeing more and more scrutiny from consumers and competitors, isn't it great to know there is an organization that is constantly involved in the policy that affects soybean farmers? The South Dakota Soybean Association has a seat at the table when policymakers at the state and national level discuss topics vital to our right to farm.

Since I became a member and got involved with the Soybean Association a few years ago, my appreciation for the organization and the work that they do has grown tremendously. I have seen firsthand the respect that policymakers give to this group because they know that we represent a vast array of soybean farmers from across the state. It is impressive to see legislators reach out to us and ask what our stance is on a specific topic because they want to have the support of this group. However, it's important to keep in mind that individual members make up the organization. By using the platform of the collective number of Association members, any single member can have their voice be heard. In my opinion, that is the greatest value of joining the South Dakota Soybean Association.

To participate in these important lobbying efforts, we would like your support in our mission to improve the lives of soybean farmers across South Dakota. The Soybean Association is partly funded by membership dues that make it possible to attend legislative gatherings, help draft legislation, and meet with our elected officials in Washington, D.C. By becoming a member, you help us not only financially, but you help our collective voice carry more weight when legislators see that we have a larger number of individuals supporting our cause. In addition to the benefits I have mentioned above, added member benefits can be found on the sdsoybean.org website.



BRENT GREENWAY

We would greatly appreciate you joining our cause to help soybean farmers across the state be more profitable and protect our right to farm. Thank you for your consideration, and feel free to contact the office or an Association board member to answer any questions you may have about joining this great organization! ■

Interested in becoming a member? Visit sdsoybean.org for a full list of membership benefits or call our office at **605-330-9942**.



SOUTH DAKOTA SOYBEAN GENESIS LEADERS PROGRAM

GROWTH... It's what soybean producers are all about. And now is the time to apply that same principle to yourself. The Soybean Genesis Leaders Program is designed to give active members of the soybean industry a deep foundation in leadership skills and industry knowledge, positioning you for growth at your operation and in your career.

The Soybean Checkoff has partnered with South Dakota Agricultural and Rural Leadership, the premier ag leadership development organization in the state, to deliver this program exclusively for soybean growers. SDARL is proud to offer our proven hands-on, in-depth learning model to maximize your opportunity for growth.

SEMINAR DETAILS

I. Soybean Industry Organizations

December 10, 2021 | 10:00am - 4:00pm | Brookings, SD

II. The Legislative Process

January 21, 2022 | 10:00am - 4:00pm | Pierre, SD

III. Innovation and Forward Focus

February 11, 2022 | 10:00am - 4:00pm | Location TBA

IV. Leadership Readiness

March 18, 2022 | 10:00am - 4:00pm | Aberdeen

APPLICATION PROCESS

Eligibility

South Dakota residents age 21 and up with direct participation in the soybean industry are invited to apply to the Genesis Program. A class of 30 will be selected.

Spouse Participation

Married applicants are strongly encouraged to attend the Genesis Program as a couple to maximize learning and growth. Unmarried applicants are welcomed.

Tuition

A class fee of \$200 will apply to each participant. At the conclusion of the Genesis Program, the fee will be refunded at the rate of \$50 per seminar attended.

Important Dates

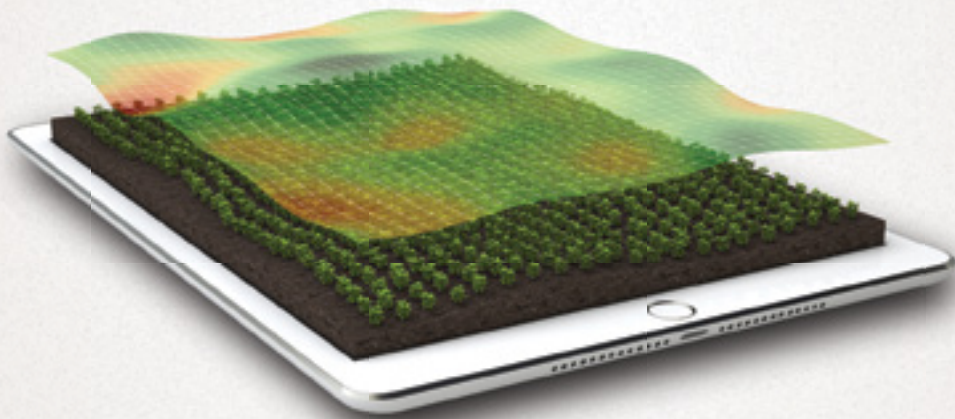
Applications will be accepted through Oct. 22, 2021. If necessary, phone or Zoom interviews will be conducted between Oct. 25-29. All applicants will be notified of selection status by Nov. 1, 2021.

READY TO APPLY?

Visit sdsoybean.org to complete the online application form.



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